

CLAIMS

1. An address resolution device comprising address registration means for registering an address assigned to a user with an address table upon reception of an address registration request from the user, and address notification means for notifying of a callee address registered with said address table upon reception of an address notification request from a caller, wherein:

said address registration means includes a function for registering an internal address of the user with said address table in conjunction with an external address of said user in response to the address registration request from the user; and

said address notification means includes a function for notifying of the external address of the callee registered with said address table when the external address of the callee registered with said address table is different from the external address of the caller, and a function for notifying of the internal address of the callee registered with the address table when the external address of the callee registered with the address table is the same as the external address of the caller, in response to the address notification request from the caller.

2. The address resolution device according to claim 1, wherein:

said address registration means includes a function for receiving a user identifier of a source; a function for acquiring a source address; a function for registering said acquired source address with said address table as an external address

5 corresponding to said received user identifier of the source; a function for receiving a source terminal address; and a function for registering said received source terminal address with said address table as an internal address corresponding to said received user identifier of the source; and

10 said address notification means includes a function for receiving a user identifier of a callee terminal; a function for acquiring the external address of the callee terminal corresponding to said received user identifier of the callee terminal by consulting said address table; a function for
15 acquiring a source address; a function for notifying of said acquired external address of the callee terminal when said acquired external address of the callee terminal is different from said acquired source address; and a function for acquiring and notifying of the internal address of the callee terminal
20 corresponding to said received user identifier of the callee terminal by consulting said address table when said acquired external address of the callee terminal is the same as said acquired source address.

3. The address resolution device according to claim 1,
wherein:

said address registration means includes a function for
receiving a user identifier of a source; a function for acquiring
5 a source address; a function for registering said acquired source
address with said address table as an external address
corresponding to said received user identifier of the source; a
function for receiving a source terminal address; and a function
for registering said received source terminal address with said
10 address table as an internal address corresponding to said
received user identifier of the source; and

said address notification means includes a function for
receiving a user identifier of a callee terminal; a function for
acquiring the external address of the callee terminal
15 corresponding to said received user identifier of the callee
terminal by consulting said address table; a function for
receiving the user identifier of the caller terminal; a function
for acquiring the external address of the caller terminal
corresponding to said received user identifier of the caller
20 terminal by consulting said address table; a function for
notifying of said acquired external address of the callee
terminal when said acquired external address of the callee
terminal is different from said acquired external address of the

caller terminal; and a function for acquiring and notifying of the internal address of the callee terminal corresponding to said received user identifier of the callee terminal by consulting said address table when said acquired external address of the
5 callee terminal is the same as said acquired external address of the caller terminal.

4. The address resolution device according to claim 2 or 3, wherein:

in said address registration means, said function for
10 acquiring a source address includes a function for acquiring a source port number, and said function for registering the source address with the address table as an external address includes a function for registering said acquired source port number; and

in the address notification means, said function for
15 acquiring the external address of the callee terminal includes a function for acquiring the corresponding port number by consulting said address table, and said function for notifying of the external address of the callee terminal includes a function for notifying of said acquired corresponding port number.

20 5. The address resolution device according to any of claims 2 to 4, wherein said address registration means includes a function for registering said received source terminal address with said address table as an internal address when said received

source terminal address is different from said acquired source address.

6. The address resolution device according to any of claims 1 to 5, wherein:

5 said address registration means includes a function for registering a grouping ID with said address table when said user is grouped together with another user in response to the address registration request from the user; and

10 said address notification means includes a function for notifying of said internal address of the caller registered with said address table when the callee and the caller have the same grouping ID registered with said address table in response to the address notification request from the caller.

15 7. The address resolution device according to any of claims 1 to 6, wherein said address notification means includes a function for notifying of a registered entry in the address table in response to a request from a terminal.

20 8. An address resolution method comprising an address registration step of registering an address assigned to a user with an address table upon reception of an address registration request from the user, and an address notification step of notifying of a callee address registered with said address table upon reception of an address notification request from a caller,

wherein:

said address registration step includes a step of registering an internal address of said user with said address table in conjunction with an external address of said user in response to the address registration request from the user; and

said address notification step includes a step of notifying of the external address of the callee registered with said address table when the external address of the callee registered with said address table is different from the external address of the caller, and a step of notifying of the internal address of the callee registered with said address table when the external address of the callee registered with the address table is the same as the external address of the caller, in response to the address notification request from the caller.

9. The address resolution method according to claim 8, wherein:

said address registration step includes a step of receiving a user identifier of a source; a step of acquiring a source address; a step of registering said acquired source address with said address table as an external address corresponding to said received user identifier of the source; a step of receiving a source terminal address; and a step of registering said received source terminal address with said address table as an internal

address corresponding to said received user identifier of the source; and

5 said address notification step includes a step of receiving a user identifier of a callee terminal; a step of acquiring the external address of the callee terminal corresponding to said received user identifier of the callee terminal by consulting said address table; a step of acquiring a source address; a step of notifying of said acquired external address of the callee terminal when said acquired external address of the callee
10 terminal is different from said acquired source address; and a step of acquiring and notifying of the internal address of the callee terminal corresponding to said received user identifier of the callee terminal by consulting said address table when said acquired external address of the callee terminal is the same as
15 said acquired source address.

10. The address resolution method according to claim 8, wherein:

20 said address registration step includes a step of receiving a user identifier of a source; a step of acquiring a source address; a step of registering said acquired source address with said address table as an external address corresponding to said received user identifier of the source; a step of receiving a source terminal address; and a step of registering said received

source terminal address with said address table as an internal address corresponding to said received user identifier of the source; and

5 said address notification step includes a step of a
receiving a user identifier of a callee terminal; a step of
acquiring the external address of the callee terminal
corresponding to said received user identifier of the callee
terminal by consulting said address table; a step of receiving
the user identifier of the caller terminal; a step of acquiring
10 the external address of the caller terminal corresponding to said
received user identifier of the caller terminal by consulting
said address table; a step of notifying of said acquired external
address of the callee terminal when said acquired external
address of the callee terminal is different from said acquired
15 external address of the caller terminal; and a step of acquiring
and notifying of the internal address of the callee terminal
corresponding to said received user identifier of the callee
terminal by consulting said address table when said acquired
external address of the callee terminal is the same as said
20 acquired external address of the caller terminal.

11. The address resolution method according to claim 9 or
10, wherein:

in said address registration step, said step of acquiring a

source address includes a step of acquiring a source port number, and said step of registering the source address with the address table as an external address includes a step of registering said acquired source port number; and

5 in said address notification step, said step of acquiring the external address of the callee terminal includes a step of acquiring the corresponding port number by consulting said address table, and said step of notifying of the external address of the callee terminal includes a step of notifying of said
10 acquired corresponding port number.

12. The address resolution method according to any of claims 8 to 11, wherein:

 said address registration step includes a step of registering a grouping ID with said address table when the user
15 is grouped together with another user in response to the address registration request from the user; and

 said address notification step includes a step of notifying of the internal address of the callee registered with said address table when the callee and the caller have the same
20 grouping ID registered with said address table in response to the address notification request from the caller.

13. A communication system comprising an address resolution device on a communication network for communicating between

terminals connected to the communication network, wherein:

said terminal includes means for sending the user identifier of the source and the terminal address of the source to said address resolution device to request for an address

5 registration;

said address resolution device includes an address table for registering addresses of terminals connected to the network, and the address resolution device includes means for receiving the user identifier of the source transmitted from said terminal

10 upon reception of an address registration request from said

terminal; means for acquiring the source address; means for registering said acquired source address with said address table as an external address corresponding to said received user

identifier of the source; means for receiving the source terminal

15 address transmitted from the terminal; and means for registering

said received source terminal address with said address table as an internal address corresponding to said received user

identifier;

said terminal includes means for sending a user identifier

20 of a callee terminal to said address resolution device to request for an address notification; and

said address resolution device includes means for receiving the user identifier of the callee terminal transmitted from said

terminal upon reception of the address notification request from
said terminal; means for acquiring the external address of the
callee terminal corresponding to said received user identifier of
the callee terminal by consulting said address table; means for
5 acquiring the source address; means for notifying of said
acquired external address of the callee terminal when said
acquired terminal address of the callee terminal is different
from said acquired source address; and means for acquiring and
notifying of the internal address of the callee terminal
10 corresponding to said received user identifier of the callee
terminal by consulting said address table when said acquired
external address of the callee terminal is the same as said
acquired source address.

14. A communication system comprising an address resolution
15 device on a communication network, for communicating between
terminals connected to the communication network, wherein:

said terminal includes means for sending the user
identifier of the source and the terminal address of the source
to said address resolution device to request for an address
20 registration;

said address resolution device includes an address table
for registering addresses of terminals connected to the network,
and said address resolution device includes means for receiving

the user identifier of the source transmitted from said terminal upon reception of an address registration request from said terminal; means for acquiring the source address; means for registering said acquired source address with said address table as an external address corresponding to said received user identifier of the source; means for receiving the source terminal address transmitted from said terminal; and means for registering said received source terminal address with said address table as an internal address corresponding to the received user identifier;

said terminal includes means for sending a user identifier of a callee terminal and the user identifier of the caller terminal to said address resolution device to request for an address notification; and

said address resolution device includes means for receiving the user identifier of the callee terminal transmitted from said terminal upon reception of an address notification request from said terminal; means for acquiring the external address of the callee terminal corresponding to said received user identifier of the callee terminal by consulting said address table; means for receiving the user identifier of the caller terminal transmitted from said terminal; means for acquiring the external address of the caller terminal corresponding to the received user identifier

of the caller terminal by consulting said address table; means
for notifying of said acquired external address of the callee
terminal when said acquired external address of the callee
terminal is different from said acquired external address of the
5 caller terminal; and means for acquiring and notifying of the
internal address of the callee terminal corresponding to said
received user identifier of the callee terminal by consulting
said address table when said acquired external address of the
callee terminal is the same as said acquired external address of
10 the caller terminal.

15. The communication system according to claim 13 or 14,
wherein:

in said address resolution device, said means for acquiring
a source address includes means for acquiring a source port
15 number, and said means for registering the source address with
the address table as an external address includes means for
registering said acquired source port number; and

said means for acquiring the external address of the callee
terminal includes means for acquiring the corresponding port
20 number by consulting said address table, and said means for
notifying of the external address of the callee terminal includes
means for notifying of said acquired corresponding port number.

16. The communication system according to any of claims 13

to 15,

wherein said address resolution device includes means for registering a grouping ID with said address table when said terminal is grouped together with another terminal in response to the address registration request from said terminal; and

means for notifying of the internal address of said callee terminal registered with said address table when both the callee terminal and the caller terminal have the same grouping ID registered with said address table in response to the address notification request from said terminal.

17. An address resolution device comprising address registration means for registering a mail address assigned to a user with an address table upon reception of an address registration request from the user, and address notification means for notifying of a recipient mail address registered with the address table upon reception of an address notification request from a sender, wherein

said address registration means includes a function for registering an internal mail address of said user with said address table in conjunction with an E-mail address of said user in response to the address registration request from the user; and

said address notification means includes a function for

notifying of the E-mail address of the recipient registered with
said address table when the domain address of the E-mail address
of the recipient registered with said address table is different
from the domain address of the E-mail address of the sender, and
5 a function for notifying of the internal address of the recipient
registered with said address table when the domain address of the
E-mail address of the recipient registered with said address
table is the same as the domain address of the E-mail address of
the sender, in response to the address notification request from
10 the sender.

18. An address resolution device comprising address
registration means for registering a telephone number assigned to
a user with an address table upon reception of an address
registration request from the user, and address notification
15 means for notifying of a callee telephone number registered with
said address table upon reception of an address notification
request from a caller, wherein:

said address registration means includes a function for
registering an internal telephone number of said user with said
20 address table in conjunction with an external telephone number of
said user in response to the address registration request from
the user; and

said address notification means includes a function for

notifying of the external telephone number of the callee and the
internal telephone number of the callee registered with said
address table when the external telephone number of the callee
registered with said address table is different from the external
5 telephone number of the caller, and a function for notifying of
the internal telephone number of the callee registered with said
address table when the external telephone number of the callee
registered with said address table is the same as the external
telephone number of the caller, in response to the address
10 notification request from the caller.